

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C07H 21/04, C12N 15/09, 15/79, A61K 31/70		A1	(11) International Publication Number: WO 97/48720 (43) International Publication Date: 24 December 1997 (24.12.97)
(21) International Application Number: PCT/US97/10486 (22) International Filing Date: 17 June 1997 (17.06.97)		(81) Designated States: AU, CA, JP, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(30) Priority Data: 60/019,808 17 June 1996 (17.06.96) US		Published <i>With international search report.</i>	
(71) Applicant (for all designated States except US): FOX CHASE CANCER CENTER [US/US]; 7701 Burhome Avenue, Philadelphia, PA 19111 (US).			
(72) Inventors; and (75) Inventors/Applicants (for US only): TSICHLIS, Philip [US/US]; 50 Brentwood Avenue, Willow Avenue, PA 19090 (US). GRIMES, H., Leighton, III [US/US]; Apartment 22, 1 Christian Street, Philadelphia, PA 19147 (US). ZWEIDLER-McKAY, Patrick [US/US]; 2nd floor, 66 Cameron Avenue, West Somerville, MA 02144-2404 (US).			
(74) Agents: REED, Janet, E. et al.; Dann, Dorfman, Herrell & Skillman, Suite 720, 1601 Market Street, Philadelphia, PA 19103 (US).			

(54) Title: NUCLEIC ACID MOLECULE FOR ENHANCING GENE EXPRESSION

(57) Abstract

Novel nucleic acid molecules are provided comprising a mutated promoter sequence, preferably a mutated human cytomegalovirus promoter sequence, which is no longer recognized by the Gfi-1 transcriptional repressor. Loss of repressor recognition results in augmented gene expression in recombinant vectors containing this promoter. The promoter may be used to enhance production levels of clinically beneficial proteins in cells transformed therewith. These vectors can be used for the generation of constructs for use in gene therapy and as DNA vaccines.